

# 2005 Envirothon Oral Presentation Scenario

## Current Issue

### Managing Cultural Landscapes

#### PROBLEM STATEMENT

Bluebird County has been given a 250-acre farmstead to be developed as an education center. The county will receive a \$10,000,000 endowment if it can write a management plan for the farm in eight months. The county executive has formed a committee that includes, county planner, parks director, a representative from public works, and the chair of a group known as “Friends of the Bigg Farm”. Along with the farm and endowment, the gift requires the following:

- The farm should accurately demonstrate or recreate agricultural practices with plants and animals that existed on the property between 1890—1900. During this period a family operated the farm with the assistance of two other families.
- The main farmhouse still exists and is in good condition; however, renovations have eliminated some key architectural elements that should be recaptured. The porches have been enclosed and architecturally inconsistent siding has been utilized.
- The vista to the north includes a valley and regional hillside escarpment. A subdivision is planned for the adjacent property that will provide workforce housing; however, home sites may impact the turn of the century vista characteristics.
- On-site there is a 50-acre apple orchard and a popular farmers market. The orchard has been in use continuously since prior to World War II. The original heritage trees are gone. During the period of 1947—1963 numerous pesticides were utilized in the production of apples. The pesticides included heavy metal-based materials and organochlorine based chemicals. Unacceptable residual amounts of heavy metals including lead, mercury and arsenic are known to exist in the soils along with daughter and degradation products of organochlorine compounds. The soil samples were a composite of equal portions of the topsoil profile. The samples represent the top 18 inches of soil. The deeper soil below 18 inches is not contaminated. Sample point A represents approximately 10,000 square feet and sample point B is composed of an area 5,000 square feet.

Data Table for Sample Points A and B

	Sample Point A	Sample Point B
Lead	204 ppm	120 ppm
Mercury	0.166 ppm	0.105 ppm
Arsenic	48 ppm	28 ppm
4, 4' DDE	0.4 ppm	0.1 ppm

Accepted values for soil contamination are listed below.

Parameter	Accepted Value
Lead	50 ppm
Mercury	0.002 ppm
Arsenic	7.5 ppm
4, 4' DDE	0.044 ppm

See [www.dec.state.ny.us/website/der/tagms/prtg4046d.html](http://www.dec.state.ny.us/website/der/tagms/prtg4046d.html) for background information.

- Two large former fields that were used for grain and animal forage crops have been inactive for the last 15—20 years. Runoff water from road systems and regional drainage projects have diverted water onto the property. The fields are now a mix of grasses, shrubs, red and gray dogwood, and willow. Northern harrier are frequently seen around the fields. The farm restoration plan needs to reclaim these fields, yet not cause excessive loss of northern harrier habitat or regulated area.
- The farm was self-sustaining with a small mill works to both saw timber and process grain. The millponds have filled in and are now marshes. Portions of the marsh have covered over important structures associated with the mill. These structures need to be reclaimed in order for the public to gain an understanding of a self-sufficient farmstead. Complete reclamation would eliminate two acres of marshland.

Your task is to present a management plan for the Bigg Farm that incorporates the six main concerns. The plan should reflect the interest of the different committee members. Any budget should differentiate between restoration cost and long-term administration. Federal, State and local law must be taken into consideration. “City” teams may use any appropriate county/town for actual land use laws, regulations, etc.; other teams must use their own counties/towns. Actual localities are not to be identified in the presentation.